Middle Rio Grande Water Balance Model

Poster Abstract

The Middle Rio Grande Water Balance Model is a dynamic simulation model that keeps track of the balance of water moving into and out of the basin through both the surface water and groundwater regimes, and the balance of water moving between surface water and groundwater within the basin. To achieve this computational balance, the model tracks the significant inputs and outputs for both the surface water and groundwater systems. Tracking the interaction between the surface water and groundwater systems is an important attribute of the model. This model has been successfully calibrated to reproduce known surface water outflow and the groundwater depletion computed by the USGS groundwater model for a study period of 1960 to 1994. The ultimate goal is to develop a decision tool that will allow for evaluation of water policy options. This model was developed on a PC platform using Powersim Consrtuctor and can be run on any Pentium PC or equivalent using software that can be downloaded from the Internet. Variable model parameters can be controlled via slider bars. The user can select data sources and can turn on management options such as a riverside infiltration gallery, and the reduction of the riparian area.